

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

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U.S. PATENT AND TRADEMARK OFFICE
BOARD OF PATENT APPEALS
AND INTERFERENCES

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte KUEI-WU HUANG, TSIU C. CHAN AND GREGORY C. SMITH

Appeal No. 2005-0773
Application No. 09/517,987

ON BRIEF

Before THOMAS, BARRY, and LEVY, Administrative Patent Judges.

THOMAS, Administrative Patent Judge.

ON REQUEST FOR REHEARING

In a paper received at the board on July 5, 2005, bearing a certificate of mailing on June 29, 2005, appellants request that we reconsider the decision dated April 29, 2005, wherein we sustained the decision of the Examiner rejecting various claims on appeal under 35 U.S.C. § 102 and 35 U.S.C. § 103.

In the request for rehearing appellants first assert that Hsu provides no basis for the conclusions drawn in our prior decision. This view is plainly without merit as we explained in our original opinion, despite appellants' protestations otherwise. At page 5 of our original opinion we made reference to and even quoted part of the summary of the invention at the bottom of col. 1 of this reference. We emphasize again that the teaching at

col. 1, lines 45-49 plainly indicates that the source and drain regions extended downwardly from a surface to a depth of less than 100 nm. This is restated again in the portion quoted at the bottom of page 5 of the original opinion at lines 53 - 54 which states "forming the source and drain regions ... so that the regions extend downwardly from the surface to a depth of less than 100 nm."

Between pages 1 through 5 of the request for rehearing, appellants repeatedly argue that Hsu does not consider the source and drain regions described in this portion of the summary as including the doped epitaxial layer 50. Notwithstanding that other portions in Hsu than the summary the invention identified in the previous decision may indicate otherwise to the artisan, the noted portion in the summary relied upon by the Examiner and us in reaching our conclusion to affirm the Examiner's rejections plainly does so indicate to the artisan. The summary very clearly states in two instances that the source and drain regions are considered by Hsu to extend downwardly from the surface of Hsu's MOSFET device. This noted portion in the summary of the invention, which may very well be the only portion in this reference to so indicate, does not as argued indicate that the epitaxial layer regions 50 are merely conductive structures.¹ Therefore, contrary to the assertions made in topic 1 of the request for rehearing, Hsu does provide an adequate basis for the conclusions drawn in our original prior decision.

¹Appellants' passing mention of the Pierce patent is not pertinent to the issue presented in the original decision nor here since the Examiner has withdrawn a rejection under 35 U.S.C. § 103 relying upon this reference as indicated at footnote 1 on page 2 of our original opinion.

At page 5 of the request for rehearing appellants broadly assert that the limitation of "lightly doped" is not satisfied by merely being less heavily doped than in another region. This relates to our discussion at the top of page 6 of our prior decision with respect to argued dependent claims 87 and 90. Appellants present no technical argument to assert error in our conclusion. Hence the mere assertion is made that the fact the implanted source and drain regions of Hsu are comparatively less heavily doped than the heavily doped epitaxial region 50 does not make these regions lightly doped within the ordinary meaning of that term. Yet, appellants have presented no other basis in which to interpret the term either in these claims or as disclosed. There is no claimed reference point on which to judge any meaningful different values than we have done and the Examiner has done other than to compare the relative doping levels of the materials comprising the source and drain regions of the FET in Hsu.

Lastly, appellants assert that we have completely ignored appellants' argument with respect to claim 93. Although it is accurate to indicate that we have not separately discussed this claim in our prior decision, we have made reference at page 3 of our prior decision to sustaining and expanding upon the existing rejections of the Examiner. We therefore implicitly relied upon the Examiner's analysis with respect to the oxide formed around the gate electrode in Hsu as noted by the Examiner in the paragraph bridging pages 3 and 4, as well as the discussion by the Examiner at page 6 of the Answer as to claim 93. Appellants' original position with respect to claim 93 at page 14 of the principal

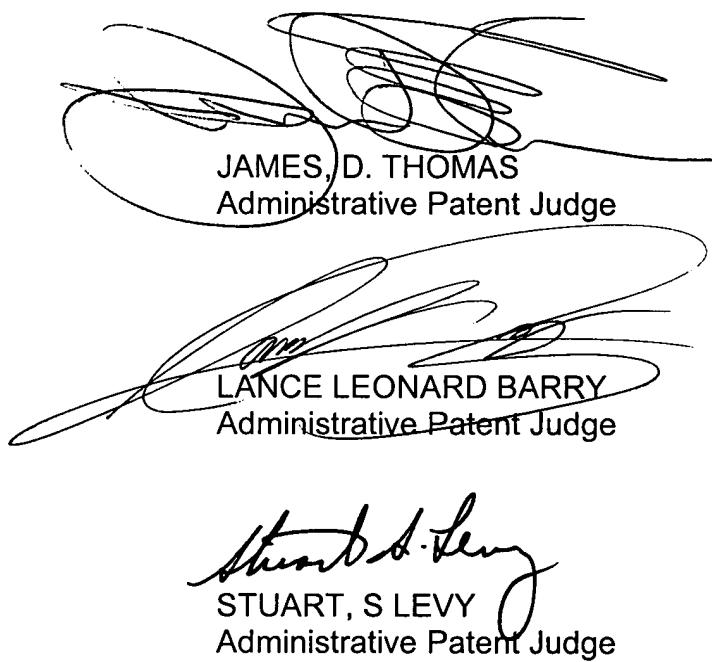
Brief on appeal did not contest the Examiner's responsive arguments at page 6 of the Answer. Likewise, the Reply Brief contains no arguments presented as to the features of claim 93.

In broadly asserting that Hsu contains no teaching that the oxide on the sidewalls 28 of the gate electrode 20 functions as a gate oxide (request for rehearing, paragraph bridging pages 5 and 6), no assertion is made what any other function the oxide actually disclosed in Hsu is supposed to perform. Appellants' position does not assert that the oxide layer 16 beneath the gate electrode does not comprise a gate oxide. On the other hand, since the summary of the invention in Hsu makes clear that Hsu considers the source and drain regions to extend downwardly from the surface of the MOSFET, the artisan would have well considered that the side oxide layer 40 in figures 1 - 5 and 116 in figures 6 - 10 would comprise a portion or an extended portion of the gate oxide layer 16.

In view of the foregoing, appellants' request for rehearing is granted to the extent that we have in fact reviewed our findings but is denied as to making any change therein.

No time period for taking any subsequent action in connection with this appeal
may be extended under 37 CFR § 1.136(a).

DENIED



JAMES D. THOMAS
Administrative Patent Judge)
LANCE LEONARD BARRY
Administrative Patent Judge) BOARD OF PATENT
STUART S. LEVY
Administrative Patent Judge) APPEALS
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) INTERFERENCES
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